

REMARKS

Claims 1-23 remain present in this application.

The title, specification, and claims 1, 5-7, 9-13, 15, 17-19, 22 and 23 have been amended.

Reconsideration of the application, as amended, is respectfully requested.

Amendments to the Claims

Claim 1 has been rewritten to include the limitation of a hub, and claims 15 and 19 have been rewritten to limit the number of magnetic rings. These amendments are supported by Figs. 3a-3c and 4a-4c.

Objection to the Title

The title stands objected to as not being descriptive. In view of the foregoing amendments, it is respectfully submitted that this informality has been addressed. Reconsideration and withdrawal of any objection to the title are respectfully requested.

Objection to the Drawings

The drawings stand objected to under 37 CFR 1.83(a). Attached hereto are replacement drawing sheets for Figs. 3a-4c, in which reference numeral 62 has been added.

It is noted that amended claim 12 sets forth that the magnets 75, 76, 77 are disposed axially with identical poles on opposing ends opposing each other, as is shown in Figs. 4a and 4b. It is also noted that amended claim 13 sets forth that the magnets 75, 76, 77 are disposed axially with opposite poles on opposing ends opposing each other, as is shown in Fig. 4c.

Accordingly, it is respectfully submitted that the drawings show every feature of the invention specified in the claims. Reconsideration and withdrawal of any objection to the drawings are therefore respectfully requested.

Rejection under 35 USC 112

Claims 12 and 13 stand rejected under 35 USC 112, first paragraph. This rejection is respectfully traversed.

The Examiner has assumed that the magnets of claim 12 attract each other, and that the magnets of claim 13 repel each other. It is noted that claims 12 and 13 have been amended to clarify the disposition of the magnet. Since opposite poles opposing each other generate repulsive magnetic forces, the magnets of claim 12 repel each other. Identical poles opposing each other generate repulsive magnetic forces, and therefore the magnets of claim 13 attract each other. Amended claims 12 and 13 are supported by Figs. 4a, 4b, and 4c, and the related description of the figures in the specification. It is therefore respectfully submitted that the claims would enable one of ordinary skill in the art to make and/or use the invention. Reconsideration and withdrawal of the 35 USC 112, first paragraph rejection are therefore respectfully requested.

Rejection under 35 USC 102(b)

Claims 1-3, 8, 9, 11 and 15-22 stand rejected under 35 USC 102(b) as being anticipated by Ishizuka, UK Patent 2335242. This rejection is respectfully traversed.

Independent claim 1 of the present application recites a heat-dissipating device comprising a rotor having a hub, a base, a magnetic portion and a bearing portion, wherein said magnetic portion and said bearing portion are disposed on the inner side of said hub for reducing the occupied space of the heat-dissipating device.

Ishizuka discloses a rotor support comprising a stator 2 and magnetic bearings, 3a, 3b, 4a and 4b. The magnetic bearings are disposed within the stator. That is, the magnetic bearings are not disposed on the inner side of the hub of a fan.

Although the Examiner has asserted that Ishizuka teaches the bearing supporting a fan (i.e., inherently including a fan mounted to the shaft), Ishizuka does not teach that the magnetic portion and the bearing portion are disposed on the inner side of the hub of the fan. For at least this reason, Ishizuka fails to teach or suggest the heat dissipating device of independent claim 1 and its dependent claims.

Independent claim 15 of the present application recites a heat-dissipating device comprising a rotor, a base, a magnetic portion and a bearing portion. The magnetic portion further comprises a first portion having three magnetic rings, and a second magnetic portion having three magnetic rings, wherein said three magnetic rings of said first magnetic portion and said second magnetic portion generate a radially and an axially magnetic force, respectively.

Independent claim 19 of the present application recites a heat-dissipating device comprising a rotor, a base, a magnetic portion and a sleeve bearing. The magnetic portion further comprises a first portion with a plurality of magnetic rings and a second magnetic portion with a plurality of magnetic rings, wherein said first magnetic portion and said second magnetic

portion are disposed on two opposite sides of said sleeve bearing. Said magnetic rings of said first magnetic portion provide only radially magnetic forces, and said magnet rings of said second magnetic portion provide only axially magnetic forces.

Ishizuka discloses a rotor support comprising upper magnetic bearings, 3a and 3b, and lower magnetic bearings, 4a and 4b. The upper magnetic bearings and the lower magnetic bearings both comprise two magnets. However, the magnetic effects of Ishizuka are completed by a shift displace L1 between the magnetic bearing 3a and 3b, and a shift displace L2 between the lower magnetic bearing 4a and 4b, which is completely different from the present application.

Ishizuka does not teach that a magnetic portion comprises three magnetic rings, and radially magnetic forces and axially magnetic forces are generated respectively by the three magnetic rings. For at least this reason, Ishizuka fails to teach or suggest the heat dissipating device of independent claim 15 and its dependent claims.

Ishizuka also does not teach that only radially magnetic force or axially magnetic force is generated on each side of the sleeve bearing. For at least this reason, Ishizuka fails to teach or suggest the heat dissipating device of independent claim 19 and its dependent claims.

In addition, in Fig. 5 of Ishizuka, since the magnets 3a, 3aa, 3b and 3bb are respectively aligned axially or radially with each other, the magnetic field is hardly built up between the magnets 3a and 3bb, and between the magnets 3b and 3aa. Thus, the magnet 3a is not attracted to 3bb and the magnet 3b is not attracted to 3aa.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art utilized by the Examiner fails to teach or suggest the heat dissipating device of

independent claims 1, 15 and 19, and their dependent claims. Reconsideration and withdrawal of the 35 USC 102(b) rejection are therefore respectfully requested.

Rejections under 35 USC 103

Claims 4-6 stand rejected under 35 USC 103 as being unpatentable over Ishizuka in view of Nakamura et al., JP 2000/078796. This rejection is respectfully traversed.

Claims 7 and 10 stand rejected under 35 USC 103 as being unpatentable over Ishizuka and Nakamura et al. in view of Wyatt, U.S. Patent 4,471,331. This rejection is respectfully traversed.

Claims 12 and 23 stand rejected under 35 USC 103 as being unpatentable over Ishizuka in view of Mendelsohn, U.S. Patent 2,582,788. This rejection is respectfully traversed.

Claim 13 stands rejected under 35 USC 103 as being unpatentable over Ishizuka in view of Weilbach et al., U.S. Patent 5,019,738. This rejection is respectfully traversed.

Claim 14 stands rejected under 35 USC 103 as being unpatentable over Ishizuka and Nakamura et al. in view of Mehta et al., U.S. Patent 5,883,449. This rejection is respectfully traversed.

As noted above, the primary reference to Ishizuka does not disclose all of the limitations of independent claims 1, 15 and 19, and their dependent claims. The secondary references utilized by the Examiner fail to overcome the deficiencies of the primary reference. Accordingly, it is respectfully submitted that the prior art utilized by the Examiner fails to teach or suggest the heat dissipating device of independent claims 1, 15 and 19, and their dependent claims.

Reconsideration and withdrawal of the 35 USC 103 rejections are therefore respectfully requested.

Conclusion

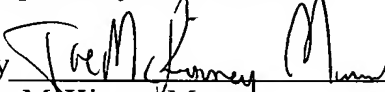
Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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